## AMENDMENTS TO THE CLAIMS

1. (currently amended) A process for preparing a supported catalyst~~, in particular for the polymerization and/or copolymerization of olefins,~~ which comprises:

   a) preparing a hydrogel;

   b) milling the hydrogel to give a finely particulate hydrogel;

   c) producing a slurry ~~based on~~comprising the finely particulate hydrogel;

   d) drying the slurry comprising the finely particulate hydrogel ~~to give the~~ thereby forming a support for catalysts;

   e) ~~producing the supported catalyst by~~ applying a first treatment compound comprising at least one of a transition metal ~~and/or at least one~~and transition metal containing compound to the support for catalysts, thereby forming the supported catalyst; and~~, if appropriate,~~

   f) optionally, activating the ~~applied metal and/or compound~~supported catalyst,

   wherein ~~a~~the finely particulate hydrogel ~~in which~~comprises:

   - at least 5% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 μm to ≤ 3 μm; and/or
   - at least 40% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 μm to ≤ 12 μm, and/or
   - at least 75% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 μm to ≤ 35 μm~~;~~

   ~~is produced in step b) and a support which can be prepared as set forth in steps a) to d) is used to produce catalysts in step e)~~.

2. (currently amended) ~~A~~The process for preparing ~~a~~the supported catalyst as claimed in claim 1, wherein the at least one of the transition metal ~~and/or at least one compound of a~~ and transition metal ~~comprising~~comprises transition metals selected from the group consisting of Sc, Y, La, Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Tc, Re, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd and Hg~~, preferably Ti, Zr, Cr, Fe, Ni, and Pd, is/are applied to the support for catalysts~~.

3. (currently amended) ~~A~~The process for preparing ~~a~~the ~~support~~supported catalyst as claimed in claim 1 ~~or 2, wherein~~ further comprising applying a second treatment compound to the treated support, wherein the second treatment compound comprises at least one of a transition metal and a transition metal containing compound ~~at least one further transition metal and/or at least one further compound of a transition metal, preferably comprising transition metals selected from the group consisting of Ti, Zr, Hf, V, Cr, Fe, Co, Ni, Zn and Pd, is/are applied to the catalyst support which has been modified with at least one transition metal and/or compound of a transition metal~~.

4. (currently amended) ~~A~~The process for preparing ~~a~~the supported catalyst as claimed in ~~any of the preceding claims, wherein~~ claim 1, further comprising applying to the support for catalysts at least one complex of a transition metal~~, preferably a metallocene compound, preferably one comprising a transition metal selected from the group consisting of Ti, Zr, Hf, V, Cr, Fe, Co, Ni, Zn and Pd, is applied to the support for catalysts~~.

5. (currently amended) ~~A~~The process for preparing ~~a~~the supported catalyst as claimed ~~in any of the preceding claims~~claim 1, wherein the supported catalyst ~~support which has been modified with at least one transition metal and/or at least one compound of a transition metal~~ is activated by an activation process selected from at least one of thermal activation, oxidation, halogenation and addition of at least one activator compound~~thermal activation, preferably calcination and/or oxidation, halogenation, preferably fluorination, and/or addition of at least one activator compound~~.

6. (currently amended) ~~A~~The process for preparing ~~a~~the supported catalyst as claimed in ~~any of the preceding claims~~claim 1, wherein ~~a catalyst support modified with at least chromium or a chromium compound is activated by:~~the first treatment compound comprises chromium or a chromium containing compound, and the supported catalyst is activated by at least one of:

a) halogenation~~; and/or~~,

b) thermal activation in an oxidizing, reducing and/or neutral atmosphere~~; and/or~~, and

c) renewed thermal activation in a reducing atmosphere,

~~with~~wherein the thermal activation ~~being~~is carried out in the range from 400°C to 1000°C~~, preferably in the range from 450°C to 900°C~~.

7. (currently amended) A supported catalyst~~, in particular for the polymerization and/or copolymerization of olefins, which can be prepared as claimed in any of the preceding claims~~ prepared by a process comprising

a) preparing a hydrogel;

b) milling the hydrogel to give a finely particulate hydrogel;

c) producing a slurry comprising the finely particulate hydrogel;

d) drying the slurry comprising the finely particulate hydrogel thereby forming a support for catalysts;

e) applying a first treatment compound comprising at least one of a transition metal and transition metal containing compound to the support for catalysts, thereby forming the supported catalyst; and

f) optionally, activating the supported catalyst,

wherein the finely particulate hydrogel comprises:

- at least 5% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 µm to ≤ 3 µm; and/or
- at least 40% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 µm to ≤ 12 µm, and/or
- at least 75% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 µm to ≤ 35 µm.

8. (currently amended) ~~A~~The supported catalyst as claimed in claim 7~~, wherein the~~ further comprising a chromium content, based on the element, ~~is~~ from 0.1% by weight to 5% by weight~~, preferably from 0.2% by weight to 1.5% by weight~~, based on the total weight of the supported catalyst.

9. (currently amended) ~~The use of a supported catalyst for the polymerization and/or copolymerization of olefins, wherein the polymerization and/or copolymerization is carried out in the presence of a supported catalyst as claimed in any of the preceding claims~~A process comprising polymerizing and/or copolymerizing olefins with a supported catalyst prepared by a process comprising:

a) preparing a hydrogel;

b) milling the hydrogel to give a finely particulate hydrogel;

c) producing a slurry comprising the finely particulate hydrogel;

d) drying the slurry comprising the finely particulate hydrogel thereby forming a support for catalysts;

e) applying a first treatment compound comprising at least one of a transition metal and transition metal containing compound to the support for catalysts, thereby forming the supported catalyst; and

f) optionally, activating the supported catalyst,

wherein the finely particulate hydrogel comprises:

- at least 5% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 μm to ≤ 3 μm; and/or
- at least 40% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 μm to ≤ 12 μm, and/or
- at least 75% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 μm to ≤ 35 μm.

10. (currently amended) ~~The use of a supported catalyst for the polymerization and/or copolymerization of olefins as claimed in claim 9,~~ The process of claim 9 wherein the polymerization and/or copolymerization is carried out in the presence ~~or absence~~ of at least one activator compound.

11. (currently amended) ~~The use of a supported catalyst for the polymerization and/or copolymerization of olefins as claimed in claim 9 or 10,~~ The process of claim 10 wherein the activator compound is ~~preferably~~ an organometallic compound~~, more preferably an~~

~~organometallic compound of a metal selected from the group consisting of B, Al, Zn and Si~~.

12. (currently amended) ~~The use of a supported catalyst as claimed in any of the preceding claims,~~ The process of claim 9 wherein the polymerization and/or copolymerization is carried out as a gas-phase fluidized-bed process and/or a suspension process.

13. (currently amended) ~~The use of a supported catalyst as claimed in any of the preceding claims,~~ The process of claim 12 wherein the polymerization and/or copolymerization is carried out in the gas-phase fluidized-bed process ~~is carried out using a~~ and the supported catalyst ~~having~~has a mean particle size of the catalyst particles in the range from 30 μm to 300 μm~~, preferably in the range from 40 μm to 100 μm~~.

14. (currently amended) ~~The use of a supported catalyst as claimed in any of the preceding claims,~~ The process of claim 12 wherein the polymerization and/or copolymerization is carried out in the suspension process ~~is carried out using a~~ and the supported catalyst ~~having~~has a mean particle size of the catalyst particles in the range from 30 μm to 350 μm~~, preferably in the range from 40 μm to 100 μm~~.

15. (currently amended) ~~The use of a supported catalyst as claimed in any of the preceding claims,~~ The process of claim 13 wherein, in a polymerization and/or copolymerization in the gas-phase fluidized-bed process, the proportion of discharged polymer having a particle size in the range from > 0 μm to ≤ 125 μm is ≤ 15% by weight~~, preferably ≤ 5% by weight, particularly preferably ≤ 3% by weight, very particularly preferably in the range from 0.3% by weight to 2% by weight~~, based on the total weight of the product.

16. (currently amended) An olefin polymer ~~obtainable using a supported catalyst as claimed in any of the preceding claims~~obtained from polymerizing and/or copolymerizing olefins with a supported catalyst prepared by a process comprising:

a) preparing a hydrogel;

b) milling the hydrogel to give a finely particulate hydrogel;

c) producing a slurry comprising the finely particulate hydrogel;

d) drying the slurry comprising the finely particulate hydrogel thereby forming a support for catalysts;

e) applying a first treatment compound comprising at least one of a transition metal and transition metal containing compound to the support for catalysts, thereby forming the supported catalyst; and

f) optionally, activating the supported catalyst,

wherein the finely particulate hydrogel comprises:

- at least 5% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 μm to ≤ 3 μm; and/or
- at least 40% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 μm to ≤ 12 μm, and/or
- at least 75% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 μm to ≤ 35 μm.

17. (currently amended) A fiber, film or molding comprising ~~polymers of olefins obtainable as claimed in any of the preceding claims, preferably as major or exclusive component~~polymers obtained from polymerizing and/or copolymerizing olefins with a supported catalyst prepared by a process comprising:

a) preparing a hydrogel;

b) milling the hydrogel to give a finely particulate hydrogel;

c) producing a slurry comprising the finely particulate hydrogel;

d) drying the slurry comprising the finely particulate hydrogel thereby forming a support for catalysts;

e) applying a first treatment compound comprising at least one of a transition metal and transition metal containing compound to the support for catalysts, thereby forming the supported catalyst; and

f) optionally, activating the supported catalyst,

wherein the finely particulate hydrogel comprises:

- at least 5% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 μm to ≤ 3 μm; and/or

- at least 40% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 μm to ≤ 12 μm, and/or
- at least 75% by volume of the particles, based on the total volume of the particles, have a particle size in the range from > 0 μm to ≤ 35 μm.

18. (new) The process according to claim 2 wherein the transition metals are selected from the group consisting of Ti, Zr, Cr, Fe, Ni, and Pd.

19. (new) The process according to claim 3 wherein the transition metals are selected from the group consisting of Ti, Zr, Hf, V, Cr, Fe, Co, Ni, Zn and Pd.

20. (new) The process according to claim 4 wherein the at least one complex of a transition metal is a metallocene compound.

21. (new) The process according to claim 20 wherein the metallocene compound comprises a transition metal selected from the group consisting of Ti, Zr, Hf, V, Cr, Fe, Co, Ni, Zn and Pd.

22. (new) The process according to claim 5 wherein the thermal activation is calcination.

23. (new) The process according to claim 5 wherein the halogenation is fluorination.

24. (new) The process according to claim 6 where the thermal activation is carried out in the range from 450°C to 900°C.

25 (new) The supported catalyst according to claim 8 wherein the chromium content is from 0.2% by weight to 1.5% by weight.

26 (new) The process of claim 11 wherein the organometallic compound comprises a metal selected from the group consisting of B, Al, Zn and Si.

27 (new) The process of claim 13 wherein the mean particle size of the catalyst particles are in the range from 40 μm to 100 μm.

28. (new) The process of claim 14 wherein the mean particle size of the catalyst particles are in the range from 40 μm to 100 μm.

29. (new) The process of claim 15 wherein the proportion of discharged polymer having a particle size in the range from > 0 μm to ≤ 125 μm is ≤ 5% by weight.

30 (new) The process of claim 29 wherein the proportion of discharged polymer having a particle size in the range from > 0 μm to ≤ 125 μm is ≤ 3% by weight.

31. (new) The process of claim 30 wherein the proportion of discharged polymer having a particle size in the range from > 0 μm to ≤ 125 μm is from 0.3% by weight to 2% by weight.